

Docket No.: 10004402-1  
AGIL-27,376  
(PATENT)

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### REMARKS

Reconsideration and Allowance are respectfully requested in view of the foregoing amendments and the following remarks.

Claims 1-37 are pending in this Application.

#### Regarding the Notice of Non-Compliant Amendment

It is unclear to Applicant how claims 33-37 in the Amendment filed May 22, 2006 are deemed to be missing their status identifiers because they were filed with the proper status identifiers. The only explanation Applicant can conjure is that one or more pages of the amendment were missed during the FAX filing of the May 22, 2006 Amendment. Regardless, applicant is providing this amendment in response to the Notice of Non-Compliant Amendment. The status of claims 33-37 is properly provided according to 37 CFR 1.121. Applicant respectfully submits that this Amendment is in compliance with 37-CFR 1.121.

#### Regarding the § 103 Rejection

Applicant respectfully points out that §706.02(j) of the MPEP holds that there are three necessary elements to establish a *prima facie* case of obviousness as adopted from *In Re Vaeck*. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine the reference teachings. *In Re Vaeck*, 947 F.2d 488. Second, there must be a reasonable expectation of success. Finally, the prior art reference, or references when combined, must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not be based on the Applicant's disclosure. *Id.*

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Independent claims 1, 29 and 35-37 were rejected under 35 U.S.C. §103(a) as being rendered obvious by Ruha (U.S. Patent No. 6,473,019). Ruha teaches a sigma delta modulator 10 that receives an analog input. See Ruha Fig. 1A, Fig. 3, and Column 4, Lines 59-62. Within the circuitry of the quantizer 14, the pending Office Action points out that there are a plurality of comparator circuits (Figs. 2 and 3, COMP N-1...COMP 1) that receive signals from the output of a loop filter 12. The Ruha specification states that, "[t]he quantizer 14 contains N-1 comparators (comp 1 to comp N-1) connected in parallel for receiving the output of the last integrator 12A. Each comparator 1 through N-1 operates with a different threshold voltage, and changes its output state accordingly as the amplitude of the input signal from the amplifier 12A changes." Ruha column 5, lines 29-37. It is well known that a quantizer is normally used to convert a non-digital discrete signal into a digital signal. Ruha is not an exception here. Thus, a non-digital discrete signal is being provided from the outputs of the last integrator 12A of a loop filter 12 to the inputs of the quantizer 14. (Note that a digital signal is being fed back from the output of the quantizer 14 to the digital to analog converts (DACs) 12B.)

Ruha does not provide any suggestion or motivation to try inputting a digital signal, rather than a non-digital discrete signal, into the inputs of the Ruha comparators (Comp N-1...Comp 1) in the quantizer 14. Nor is there any suggestion or motivation to connect the inputs of the quantizer circuit 14 so that the comparators each have "an input connected to a communications channel over which a digital signal is connected." Second, there is no reasonable expectation of getting a successful output from the quantizer 14 if merely a digital signal is input into the quantizer's comparators. There is no discussion in Ruha about this at all. Finally, the Ruha reference does not teach or suggest all the claim limitations because there is neither a teaching or suggestion to use the Ruha quantizer circuitry, depicted in Figs. 2 or 3, for the receipt of digital signals, nor is there a teaching or suggestion to have any of the inputs of the

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Ruha comparators, shown in Figs. 2 or 3, "connected to a communications channel over which a digital signal is communicated."

Furthermore, the Office Action states, "Because Ruha discloses the processing of a digital signal which meets the claims limitations, it would be obvious to one skilled in the art at the time of invention to execute Ruha's disclosure in a digitally received signal." But, Applicant respectfully points out that Ruha, as discussed above, does not process a digital signal in any manner that meets the present claims' limitations. Ruha uses a quantizer to receive a non-digital, discrete signal. Ruha would not operate properly if a digital signal was used as an input signal. Thus, the Applicant respectfully points out that there is no obvious motivation from Ruha to one of ordinary skill in the art at the time of the invention to execute Ruha's disclosure in a digitally received signal.

As such, each of the independent claims, 1, 29, and 35-37, are ready for allowance because a *prima facie* case of obviousness has not been presented.

The remaining claims are either directly or indirectly dependent upon the aforementioned independent claims (1, 29, and 35-37) and are therefore also ready for allowance. Applicant respectfully requests that this Section 103 rejection be withdrawn and submits that all claims are ready for allowance.

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**Regarding the Allowable Subject Matter**

Applicant appreciates the Examiner's indication that Claims 12-28 are allowed.

Applicant further appreciates the Examiner's indication that Claims 3, 6-9, 11, and 30-33 all contain allowable subject matter.

In view of the above amendments, Applicant believes the pending application is in condition for allowance and a Notice of Allowance is earnestly solicited.

Dated: Aug 8 2006

Respectfully submitted,

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